

APR. 18. 2003

SIGMA International  
Patent Office

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>PCT-2002-001</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/JP 02/ 05682</b>	International filing date (day/month/year) <b>07/06/2002</b>	(Earliest) Priority Date (day/month/year) <b>30/04/2002</b>
Applicant <b>FUJITA, Hideyuki</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

1



None of the figures.

## Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

A method for manufacturing inexpensive and high-quality engine fuel, from a starting material comprising waste vegetable oils which have been conventionally wasted, is provided. There are provided; a starting-material tank (1) for storing oil/fat therein; a filtering device for filtering out solid components of the oil/fat in the starting-material tank; a first reaction vessel (2) for conducting first cracking by reacting ozone with the oil/fat; an oil/water separation device (4) for separating that water content involved in the cracking reaction, from the oil/fat; a first filtering device (8) for conducting first filtering of the oil/fat; a second reaction vessel (9) for conducting second cracking; a second filtering device (10); an adding device for adding an additive; an impurity adsorbing vessel (12) and a filtering vessel (13) for cooperatively purifying the water phase component from which the oil/fat phase has been excluded by the oil/water separation device; wherein in each of the first reaction and second reaction, there are delivered a reducing agent and polymerization inhibitor into the oil/fat.

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C10G55/06 B01J19/18 B01J19/26

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C10G C10L B01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, COMPENDEX, API Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 1 026 224 A (MAERKLE HERBERT) 9 August 2000 (2000-08-09) cited in the application	1-8
X	paragraphs '0040!-'0058! figures 1,2,6,12; table 1	9-12
A	US 4 747 696 A (MCCRORY CARL E ET AL) 31 May 1988 (1988-05-31) column 1, line 40 - line 66	9,10
A	US 2001/055237 A1 (DOMINIK BRADLEY S ET AL) 27 December 2001 (2001-12-27) abstract; figures 1-10	9,10
P,X	WO 02 38708 A (MURAKAMI SEISHIRO ;FUJITA HIDEYUKI (JP)) 16 May 2002 (2002-05-16) figures 3,4,6	9-12

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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

3 April 2003

Date of mailing of the international search report

11/04/2003

Name and mailing address of the ISA

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Keipert, O

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 367 848 A (LEWIS MURRAY STUART;MURRAY STUART) 19 February 1932 (1932-02-19) page 3, line 80 -page 4, line 8 ---	1-8
Y	US 4 476 010 A (BOUK DECEASED RAYMOND S) 9 October 1984 (1984-10-09) abstract ---	1-8
A	PATENT ABSTRACTS OF JAPAN vol. 005, no. 045 (C-048), 25 March 1981 (1981-03-25) & JP 55 167249 A (MITSUI PETROCHEM IND LTD), 26 December 1980 (1980-12-26) abstract & DATABASE WPI Section Ch, Week 198110 Derwent Publications Ltd., London, GB; Class E19, AN 1981-16367D XP002237142 & JP 55 167249 A (MITSUI PETROCHEM IND CO LTD), 26 December 1980 (1980-12-26) abstract -----	1

## FURTHER INFORMATION CONTINUED FROM PCT/ISA 210

Continuation of Box I.2

Claims Nos.: 1-8 (part)

Present claims 1, 7 relate to a process comprising a "first treatment step" and a "second treatment step", which steps comprise the introduction of a compound that is defined by reference to a desirable characteristic or property, namely:

Claim 1: a polymerization inhibitor;

Claim 7: a polymerization inhibitor including a phosphorus compound.

The claims cover all possible compounds having this characteristic or property. However, the application does not provide any further support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT as to the chemical identity of said compounds. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT), because an attempt is made to define the compound by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely to the claimed process comprising a "first treatment step" and a "second treatment step", which steps may or may not comprise the introduction of a polymerization inhibitor.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/JP 02/05682

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 1-8 (part)  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP 02/05682

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1026224	A	09-08-2000	JP 2000219886 A	08-08-2000
			EP 1026224 A1	09-08-2000
			US 6364917 B1	02-04-2002
US 4747696	A	31-05-1988	US 4577975 A	25-03-1986
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			AU 6267899 A	17-04-2000
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			WO 0238708 A1	16-05-2002
			JP 2002206093 A	26-07-2002
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			EP 0029472 A1	03-06-1981
			JP 2037386 A	07-02-1990
			RO 83371 A2	15-03-1984
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			WO 8101413 A1	28-05-1981
			AT 14896 T	15-08-1985
			AU 3566784 A	21-03-1985
			BR 7909053 A	01-09-1981
			DK 318981 A	16-07-1981
			JP 2037386 B	23-08-1990
			JP 56501565 T	29-10-1981
			DE 2967499 D1	19-09-1985
			MC 1404 A	26-05-1982
JP 55167249	A	26-12-1980	NONE	